

NATURAL RESOURCES CONSERVATION SERVICE
Wyoming
CONSTRUCTION SPECIFICATIONS
FOR
DIKE

(Owner/Operator)

(Project/Title)

GENERAL

Installation shall be in accordance with a design and plan approved by the responsible technician. Details of construction shown in the design and plan but not included here shall be considered as a part of this specification. Construction activities shall be in accordance with applicable OSHA regulations and applicable flood plain ordinances.

INSTALLATION

The dike and any appurtenant structures shall be constructed to the lines, grades as shown on the drawings and/or staked in the field. All pipe and structure materials and installation shall meet the requirements of the applicable Wyoming Construction Specification(s) listed on the drawings and/or ADDITIONAL SPECIFICATIONS.

The clearing and grubbing of vegetation shall be limited to that needed to construct the dike and appurtenant structures. Any vegetation specifically designated for saving shall not be disturbed. When specific ingress/egress access routes and/or construction limits are defined the construction operations shall be limited to the designated areas.

All equipment shall be maintained and fueled away from the edge of the drainageways. Temporary measures shall be installed to prevent accidental spills from entering water bodies. Cleanup of spills shall be in accordance with applicable Federal, State, local rules/regulations.

All measures installed for dewatering the site and/or the trapping of sediment from the construction area shall be considered temporary and unless otherwise noted and shall be

removed when they are no longer needed. Excavation for dewatering bypass channels shall proceed from the downstream end.

Disturbed areas and designated critical areas will be treated as specified in the ADDITIONAL SPECIFICATIONS or as noted on the drawings.

SITE PREPARATION

Clearing and Stripping. Borrow areas and area to be occupied by the dike embankment shall be cleared of all trees, brush, logs, and sod.

Embankment Foundation. All channel banks and sharp breaks shall be sloped to no steeper than 1 horizontal to 1 vertical. Loose earth shall not be left on the foundation area to a depth in excess of 6 inches above undisturbed foundation material. The surface of the foundation area shall be thoroughly scarified before placement of the embankment material.

EXCAVATION

Cutoff Trench. The cutoff trench shall be excavated to the lines and grades shown on the drawings or as staked in the field. When specified on the drawings the cutoff trench shall be kept free of standing water during backfill operations.

Appurtenant structures. Excavation for installation of a conduit or other structure shall be to the lines and grades shown on the drawings and/or staked in the field.

EARTHFILL

Fill Material. All fill materials shall be obtained from approved borrow areas. The selection, blending, routing, and disposition of materials within the embankment shall be subject to the

approval of the technician. Fill materials shall contain no sod, brush, roots, or other perishable or unsuitable material. Cobbles and rock fragments having a maximum dimension of more than six inches shall be removed from the materials prior to compaction. Where the borrow area yields materials of varying texture and gradations, the more impervious material shall be placed toward the waterside of the dike and in the cutoff trench.

Placement. The placing and spreading of the fill material shall start at the lowest point of the foundation. The fill shall be brought up in approximately horizontal layers parallel to the axis of the dike and of such thickness that the required compaction can be obtained with the equipment used. Fill placed around structures will be brought up at approximately uniform height on all sides of the structure. The embankment shall be constructed to the lines, grades and cross-section shown on the drawings or as staked in the field.

Moisture. The moisture content of fill material shall be maintained within the limits required to prevent the excessive adherence of the fill material to the treads/tracks of equipment and ensure the crushing and blending of the soil clods.

Generally when soil material is squeezed in the hand it will retain a ball shape, but there will not be free water on the surface. As far as practicable the material shall be brought to the proper water content in the borrow pit before excavation. Supplemental water, when required, may be applied by sprinkling the materials on the fill. Uniform distribution of the moisture shall be obtained by discing, blading or other approved method prior to compaction.

COMPACTION OF FILL

Compaction shall meet the requirements of the method designated and described below:

1. Sheepsfoot roller – The maximum layer thickness shall be 8 inches before compaction. The roller shall have staggered, uniformly spaced tamping feet and be equipped with suitable cleaners. The weight of the roller

shall be not less than 2,500 pounds per foot of width. The maximum speed of the compaction equipment shall be 3 miles per hour. The entire surface of each layer placed shall receive six passes of this equipment to attain the necessary compaction. Adjustment in the number of passes may be necessary during construction.

2. Pneumatic tired equipment – The maximum layer thickness before compaction shall be six inches. A loaded scraper or wheel tractor maybe considered a pneumatic roller. The wheels of this equipment must pass over 95 percent of the surface of each lift before a new lift is placed.

3. Track laying equipment (Bulldozer) – The maximum layer thickness compaction shall be 4 inches. The tracks of the equipment must pass over 95 percent of the surface of each lift before a new lift is placed.

Compliance with compaction requirements will be determined by observation of performance for methods 1, 2, and 3. Fill not meeting the specified requirements shall be reworked or removed and replaced with acceptable fill.

DUMPED FILL

Dumped fill shall be allowed only when specifically specified on the drawings. Materials shall be placed in a manner suitable to the equipment used. Dumped materials that are excessively wet will be allowed to free drain prior to shaping. Each layer of dumped material will be smoothed and shaped. The completed dike will be to the lines, grades and cross-section shape shown on the drawings and /or staked in the field.

ADDITIONAL SPECIFICATIONS